REMARKS

Favorable reconsideration of this application is requested.

Claims 1-7 are in the case. They stand rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 21881 in view of JP 3-229773.

The invention relates to a coating composition to form a coating layer or film of a hydrophilic polyurethane resin having a moisture permeability and being non-porous, which comprises an isocyanate group-containing prepolymer obtained by reacting diphenylmethane diisocyanate with the following mixture of polyoxyalkylene polyols:

a mixture of polyoxyalkylene polyols which contains at least 60 wt%, based on the mixture of polyoxyalkylene polyols, of a polyoxyethylene polyol, said polyoxyethylene polyol having at least three hydroxyl groups and having an oxyethylene group-content of at least 10 wt%, based on the polyoxyethylene polyol; wherein said mixture of polyoxyalkylene polyols satisfies $3.0<n<3.5$, where n is the average number of hydroxyl groups, and has an average oxyethylene group-content of from 60 to 90 wt%, based on the mixture of polyoxyalkylene polyols.

The claimed coating composition provides a coating layer or film having excellent mechanical properties, such as tensile strength, elongation and abrasion resistance by maintaining an adequate moisture permeability having a low degree of swelling upon absorption of water and is excellent in washing durability. A claimed feature significant in accomplishing the coating composition to have such properties is that both the average number n of hydroxyl groups in the polyoxyalkylene polyol satisfies $3.0<n<3.5$, and also that diphenylmethane diisocyanate is used as the diisocyanate. This combination of features is not so specifically disclosed by the European patents and results in the coating composition

having unobviously superior characteristics and properties, as note Table 1 at page 21, reproduced below.

Table 1

Example	Average number of hydroxyl groups	Average hydroxyl value	Moisture permeability ($g/m^2 \cdot 24h$)	Elongation (%)	Tensile strength (kg/cm^2)	M_{100} (kg/cm^2)	Degree of swelling upon absorption of water (%)
1	3.3	47.5	14,000	130	110	90	12
2	3.1	47.9	12,000	140	118	78	9
3	3.0	48.1	16,000	160	95	65	16
4	2.6	51.3	21,000	240	48	19	32
5	2.1	55.3	17,000	350	90	24	28
6	3.0	48.1	19,000	200	62	23	26

If in the polyoxyalkylene polyol the average number n of hydroxyl groups is smaller than the claimed range, no adequate mechanical properties can be obtained and the swelling degree upon absorption of water tends to be high, no adequate washing durability thus being present. If, on the other hand, the average number n of hydroxyl groups is larger than the claimed range, the mechanical strength may be higher, but flexibility or drape deteriorates substantially, a coating composition having the excellent performance of the claimed composition thus not being attainable.

Further, even if the average number n of hydroxyl group satisfies the claimed range, if diphenylmethane diisocyanate is not used as the diisocyanate, tolylene diisocyanate for example being used, as in the examples of the European patent '881, no adequate mechanical properties can be obtained, the light resistance or NO_x yellowing resistance tending to be poor.

As so acknowledged by the Examiner, the average functionality range in the European patent '881 is broader than that of the claimed invention. However, he urges that it assertedly would be obvious to operate at the upper end of the functionality range disclosed by this European patent, expecting an increased crosslink density resulting from using an increased functionality blend to reduce swelling of the films.

Even if, arguendo, such conclusion has validity, nevertheless, it does not provide basis for the unobviously superior properties and characteristics realized by the claimed invention. The superior degree of swelling upon absorption of water obtained by the claimed invention is of such a magnitude which clearly would not be presumed by the artisan to result and be due to the claimed average number of hydroxyl groups as compared to when an average number of hydroxyl groups as in the prior art are present.

Furthermore, diphenylmethane diisocyanate is not specifically exemplified in European patent '881. The Examiner thus additionally relies on the Japanese patent to make obvious its use in the system of the European patent. This Japanese patent is referred to and discussed at page 5, first full paragraph, of the specification. As there disclosed, coating compositions of such diisocyanate have heretofore provided coating compositions of adequate mechanical strength and degree of swelling upon absorption of water. However, it is only by the specific combination of diphenylmethane diisocyanate and the claimed mixture of polyoxyalkylene polyols that unobviously superior results are obtained, as so shown. The result-effectiveness due to the claimed combination manifestly is unobvious and could not have been foreseen. It rebuts any possible *prima facie* case of obviousness conceivably made out by the combination of references.

Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. § 103 is requested.

With regard to the rejection of Claim 2 under the second paragraph of 35 U.S.C. § 112, it has been amended in a manner believed to obviate the basis for this rejection, its withdrawal thus being requested.

It is submitted that this application is now in condition for allowance and which is solicited.

Respectfully submitted,

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IN THE CLAIMS

--2. (Amended) The coating composition according to Claim 1, wherein the mixture of polyoxyalkylene polyols has an average hydroxyl value of from 15 to 60.--